

Work Order ID 70929

Friday, June 17, 2011 2:25:02 PM



Page 1

Item ID: D3196-1

Revision ID:

Item Name: Bar

Start Date: 6/17/2011

Start Qty: 4.00

Required Date: 6/30/2011

Req'd Qty: 4.00

Accept



Setup Start



Stop



Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date: 11-06-17

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3196

Rev C

100

0.00



BAND SAW

Bandsaw

Memo

0.00

Jeaspa Bandsaw

Cut blank: (0.75" x 1.50") x 26.200" long Bar

B.A 11/06/23

2 0

110

0.00



HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

1-Machine D3196-1 as per Folio FA339 and,Dwg D3196Identify as D3196-1□2-Deburr

B.A 11/06/27

2 0

120

0.00



QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

B.A 11/06/27

2 0

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 70929

Friday, June 17, 2011 2:25:02 PM



4--

Page 2

Item ID:	D3196-1	Accept		Setup	Start	
Revision ID:					Stop	
Item Name:	Bar					
Start Date:	6/17/2011	Start Qty:	4.00		Cust Item ID:	
Required Date:	6/30/2011	Req'd Qty:	4.00		Customer:	
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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130	QC8- Inspect parts - second check	0.00							
QC	Memo	0.00							
Quality Control									

140	Chemical Conversion Coat per QSI005 4.1	0.00							
HandFinish	Memo	0.00							
Hand Finishing									

150	Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3	0.00							
Powdercoat	Memo	0.00							
Powder Coating									

M 115128

START TIME: 8:30
FINISH TIME: 9:00
OVEN TEMPERATURE: 3200F

2x Ø M-11/06/27
2x Ø M-11/06/28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

[illegible]

Page 3

Accept

1. The first step in the process is to identify the problem. This involves gathering information about the situation and understanding the needs of the stakeholders involved.

2. Once the problem is identified, the next step is to develop a plan. This involves setting goals, identifying resources, and determining the steps that need to be taken to solve the problem.

3. The third step is to implement the plan. This involves putting the plan into action and monitoring progress.

4. The final step is to evaluate the results. This involves assessing the effectiveness of the solution and making adjustments as needed.

Setup Start

Stop

1. The first step is to identify the problem or question that needs to be addressed. This involves understanding the context and the specific requirements of the task.

2. Next, it is important to gather relevant information and data. This can be done through research, consultation with experts, or by analyzing existing data sets.

3. Once the information is gathered, the next step is to develop a plan or strategy to address the problem. This plan should outline the steps to be taken and the resources needed.

4. The fourth step is to implement the plan. This involves carrying out the tasks outlined in the plan and monitoring progress as it goes.

5. Finally, it is important to evaluate the results of the implementation. This involves comparing the actual outcomes with the expected outcomes and identifying any areas for improvement.

Cust Item ID:

Author's address: Department of Psychology, University of California, San Diego, La Jolla, CA 92037, USA.
E-mail: andrew@ucsd.edu

Customer:

Reference:

Run Start

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

**Insp.
Stamp**

[illegible]

0.00

Quality Control

[illegible]

0.00

Packaging

[illegible]

0.00

Quality Control

2 of BR 11-6-28

CL 11/06/28 x2

n. 628A

MF
11-06-28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, June 17, 2011 2:25:10 PM

Page 1

Work Order ID: 70929

Parent Item: D3196-1

Parent Item Name: Bar



Start Date: 6/17/2011

Required Date: 6/30/2011

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev: A New Issue 05-11-08 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6B0.750X01.50 0		Purchased	No			100	f	21.1912	2.183	9.191579			



6061-T6 Bar .750 X 1.50



Location	Loc Qty	Loc Code
MAT003	21.1912	
116405	0.4492	
116604	1.5	
✓116623	19.242	

✓100742 (0.750 X 2.000)

(please pull out of computer)

2.1916 ft
2.1916 ft.

BA 11/04/23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	70924
Description: Bar		Part Number:	D3196-1
Inspection Dwg: D3196 Rev: C		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
26.094	+/-0.010	26.094	✓		Tape	GA-12
4.045	+/-0.010	4.048	✓		Vern	GA-01
18.003	+/-0.005	18.003	✓		Tape	GA-12
0.750	+/-0.005	0.751	✓		Vern	GA-01
1.500	+/-0.010	1.503	✓		"	"
Ø0.344	+0.006/-0.001	Ø0.344	✓		"	"
Ø0.660 x 100°	+0.008/-0.001 x 0.5°	Ø0.658 x 100°	✓		"	"
0.060 x 45°	+/-0.010 x 0.5°	0.058 x 45°	✓		"	"
0.750	+/-0.010	0.752	✓		"	"
0.250	+/-0.010	0.250	✓		"	"
3.495	+/-0.010	3.495	✓		VERN	GA-01
9.000	+/-0.010	9.000	✓		Vern	CNC-02
16.844	+/-0.010	16.844	✓		Tape	GA-12
21.498	+/-0.010	21.498	✓		"	"
R0.125	+/-0.010	R0.125	✓		R-6	ref.
1.100	+/-0.010	1.091	✓		Vern	GA-01
R0.125	+/-0.010	R0.125	✓		R-6	ref.
0.444	+/-0.010	0.443	✓		Vern	GA-01

Measured by:	B.A	Audited by:	ank	Prototype Approval:	N/A
Date:	11/06/27	Date:	11/06/27	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	04.04.20	New Issue	KJ/RF	
B	06.10.24	Dwg Rev. updated	KJ/JLM	
C	07.03.21	Dimensions updated per Dwg rev. C	KJ/JLM	BE

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

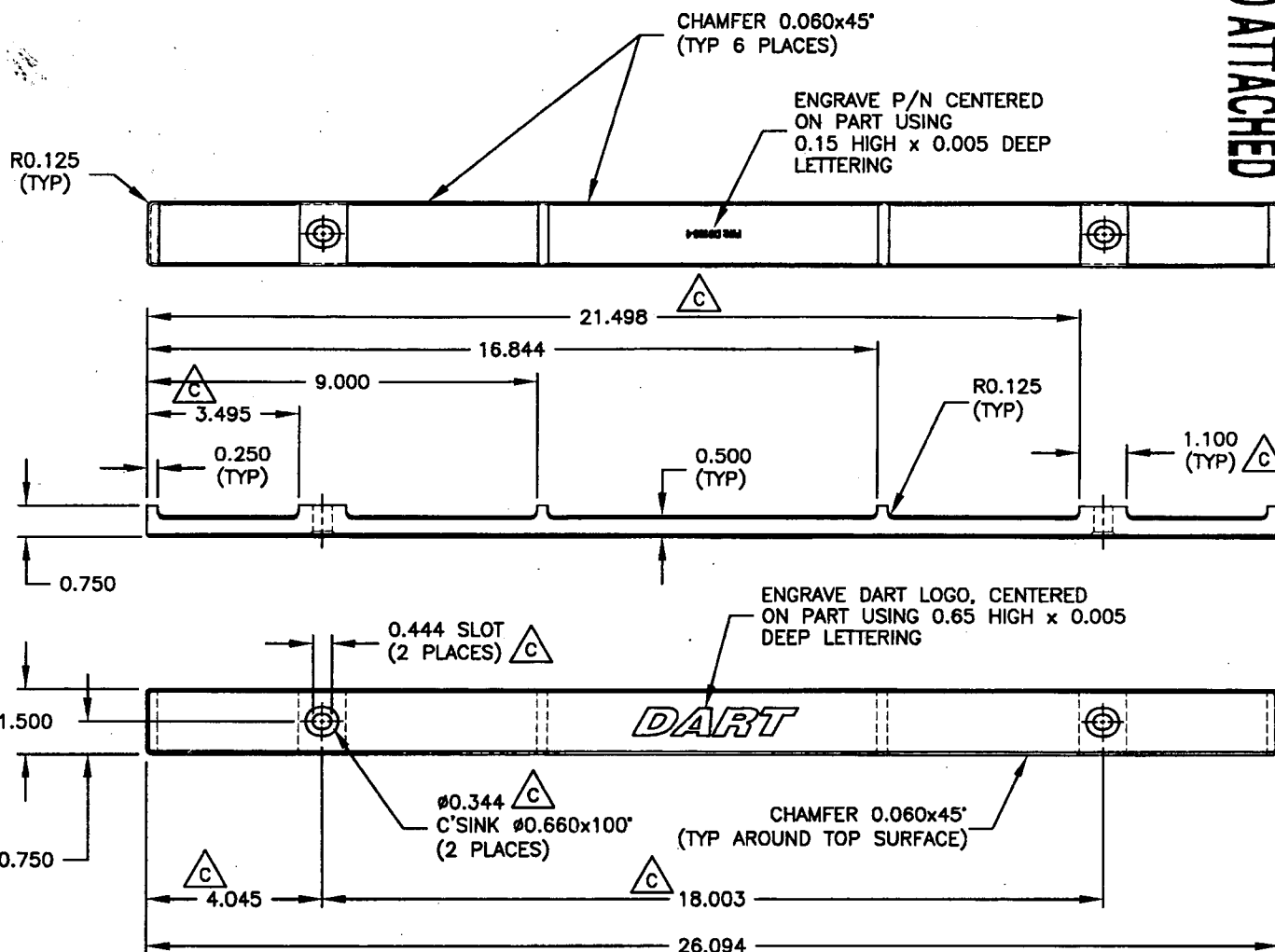
NOTE: Date & initial all entries

DART

RELEASED

06.10.31

DEO ATTACHED

**D3196-1 BAR**

- 1) MATERIAL: 6061-T6/T651 ALUMINUM (QQ-A-200/8 OR QQ-A-225/8)
(REF DART SPEC. M6061T6B)
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
POWDER COAT GREY SANDTEX (4.3.5.6) PER DART QSI 005 4.3
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 70929

DESIGN	DRAWN BY	DART AEROSPACE LTD	REV. C
90	JB	HAWKESBURY, ONTARIO, CANADA	
CHECKED MH	APPROVED JB	DRAWING NO. D3196	SHEET 1 OF 3
DATE 06.10.31		TITLE BAR	SCALE 1:4
A:	03.06.25	NEW ISSUE	
B:	06.09.25	ADD D3196-5	
C:	06.10.31	ADD SLOTS ON -1; REMOVED -5	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

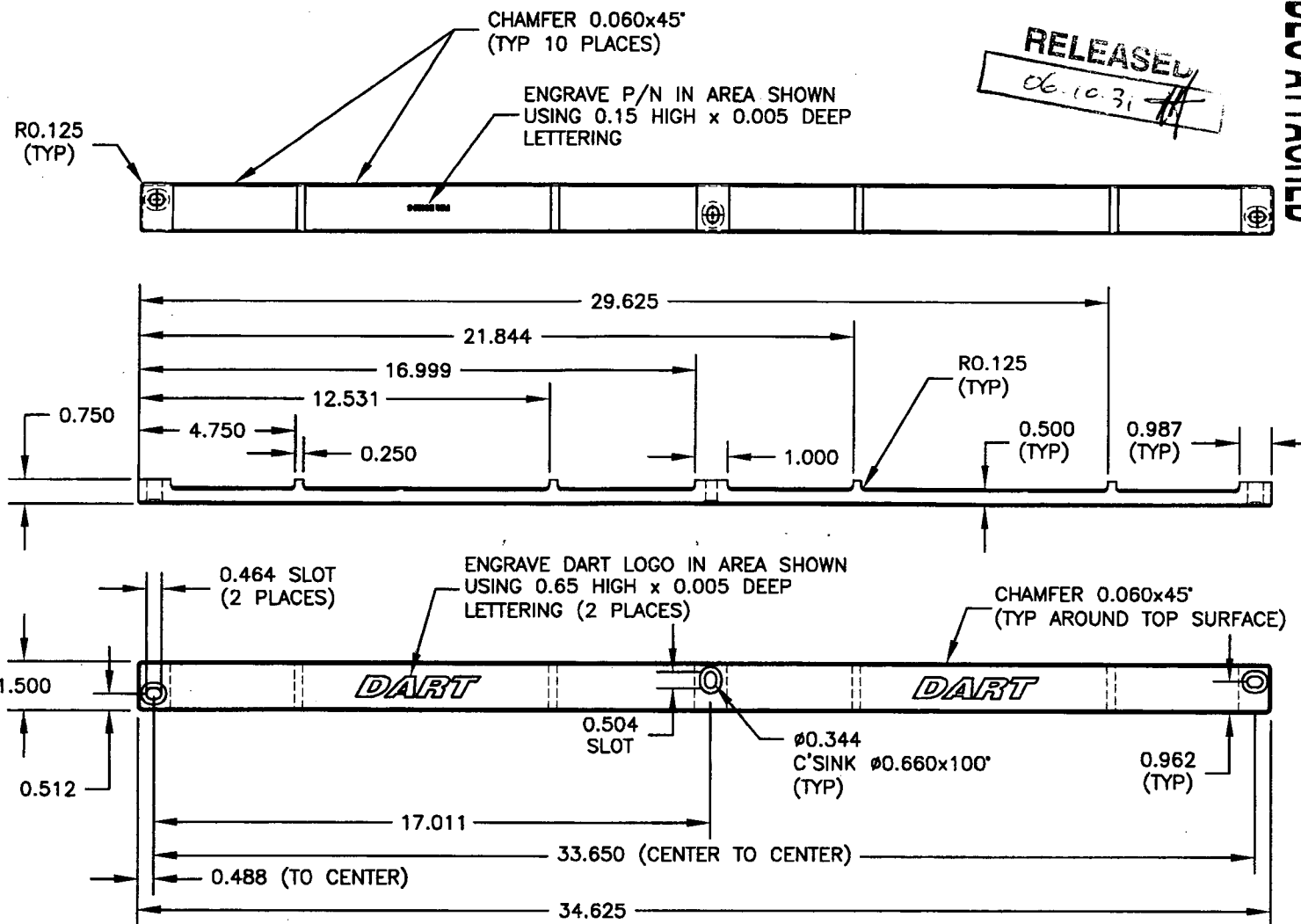
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DEO ATTACHED

RELEASED
06-10-31



D3196-3 BAR

- 1) MATERIAL: 6061-T6/T651 ALUMINUM (QQ-A-200/8 OR QQ-A-225/8) (REF DART SPEC. M6061T6B)
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
POWDER COAT GREY SANDTEX (4.3.5.6) PER DART QSI 005 4.3
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

0610929

DESIGN	QD	DRAWN BY	JR	DART AEROSPACE LTD
CHECKED	PH	APPROVED	JR	HAWKESBURY, ONTARIO, CANADA
DATE	06.10.31	TITLE	BAR	REV. C
		DRAWING NO.	D3196	SHEET 2 OF 3
		SCALE	1:5	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

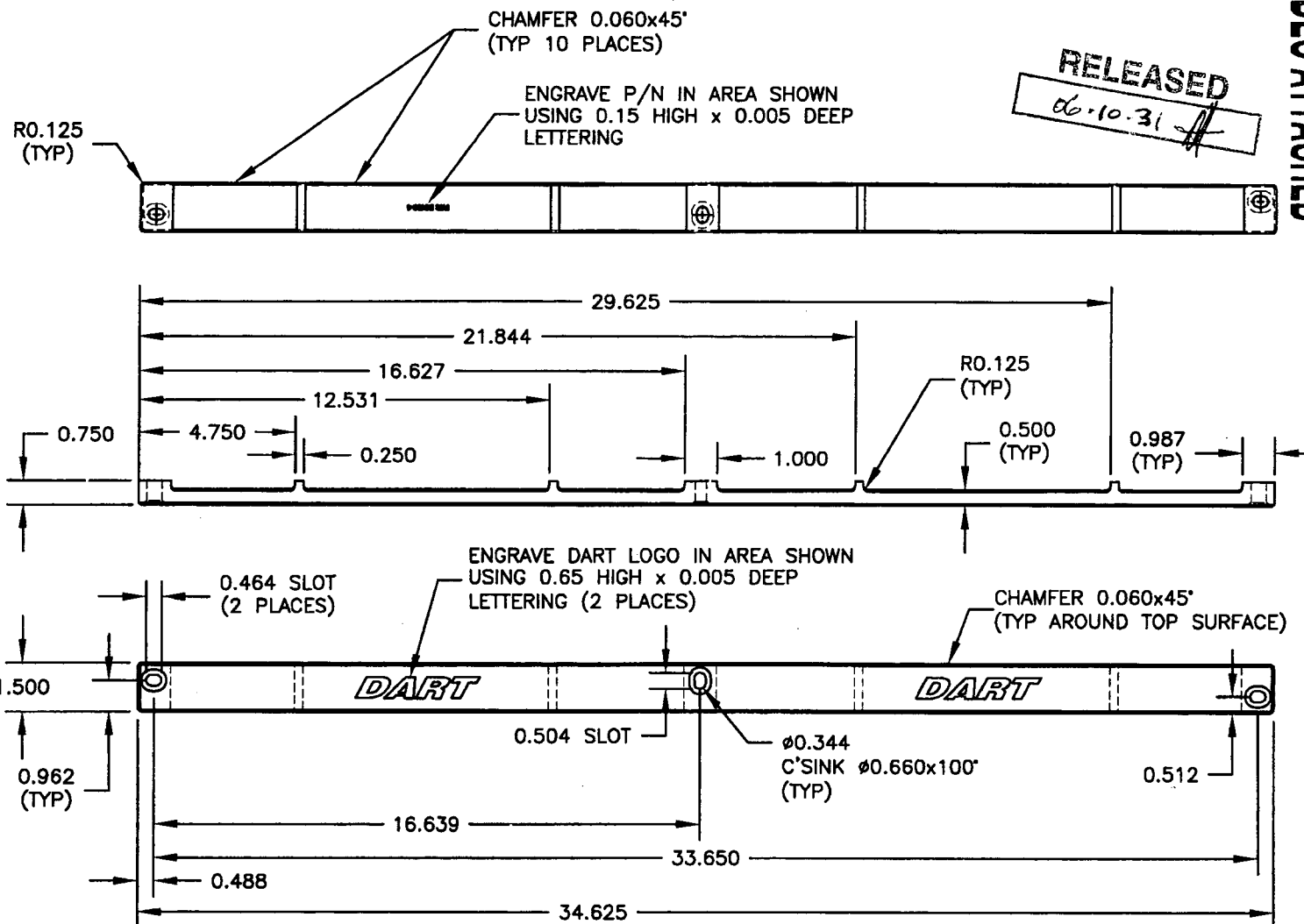
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DEO ATTACHED

RELEASED
06-10-31



DESIGN	QC	DRAWN BY	JR	DART AEROSPACE LTD
CHECKED	PH	APPROVED	JR	HAWKESBURY, ONTARIO, CANADA
DATE	06.10.31	DRAWING NO.	D3196	REV. C
TITLE	BAR	SHEET	3 OF 3	SCALE
				1:5

D3196-4 BAR

- 1) MATERIAL: 6061-T6/T651 ALUMINUM (QQ-A-200/8 OR QQ-A-225/8) (REF DART SPEC. M6061T6B)
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
POWDER COAT GREY SANDTEX (4.3.5.6) PER DART QSI 005 4.3
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

u/b 70929

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DRAWING NO. D3196	TITLE BAR	REV. C	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D3196-C-1	SHEET NO. SHEET 1 OF 2	SCALE NTS
DRAWN <i>ASS</i>	CHECKED <i>[Signature]</i>	MFG. APPR. <i>[Signature]</i>	APPROVED <i>[Signature]</i>		DE APPR. <i>[Signature]</i>		
DATE 08.08.27	DATE 08.08.28	DATE 08.08.29	DATE 08.08.29		DATE 08.08.29	DATE 08.09.04	

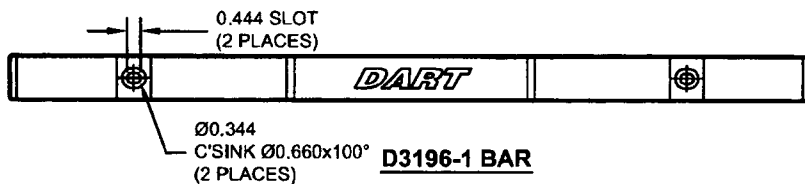
SHEET 1 MODIFY SLOT DIMENSIONING ON D3196-1 AS SHOWN:

IS:



D3196-1 BAR

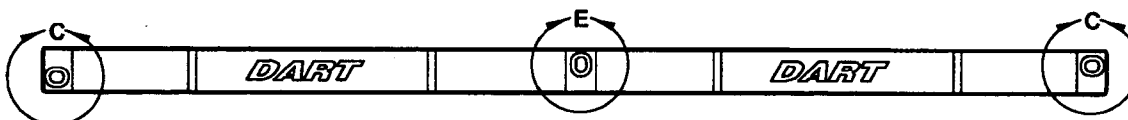
WAS:



D3196-1 BAR

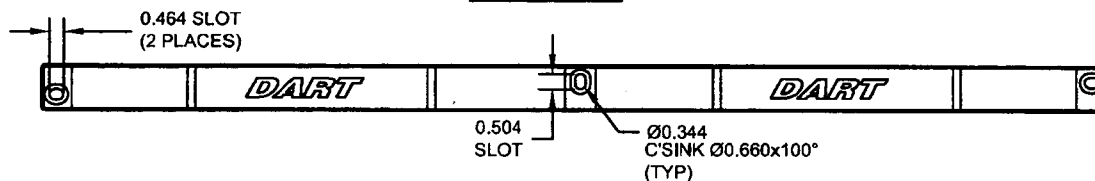
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IS:



D3196-3 BAR

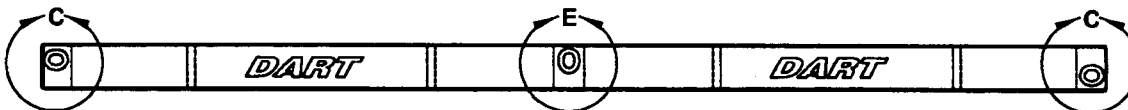
WAS:



D3196-3 BAR

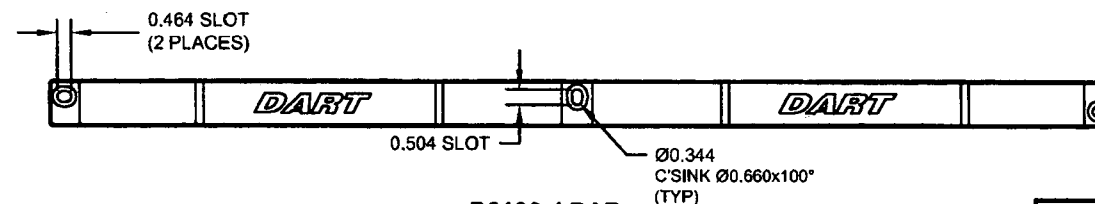
SHEET 3 MODIFY SLOT DIMENSIONING ON D3196-4 AS SHOWN:

IS:



D3196-4 BAR

WAS:



D3196-4 BAR

W6 90929

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

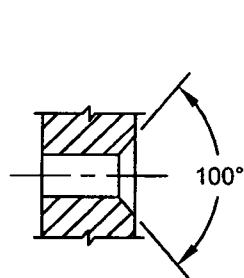
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

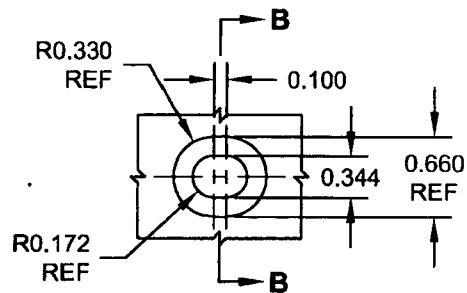
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

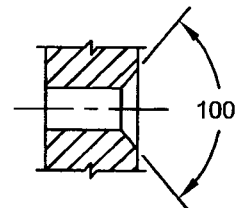
DRAWING NO. D3196	TITLE BAR	REV. C	DART AEROSPACE LTD ENGINEERING ORDER	D.E.O. NO. D3196-C-1	SHEET NO. SHEET 2 OF 2	SCALE NTS
DRAWN <i>ASS</i>	CHECKED <i>[Signature]</i>	MFG. APPR. <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DE APPR. <i>[Signature]</i>		
DATE 08.08.27	DATE 08.08.28	DATE 08.08.29	DATE 08.08.29	DATE 08.08.29	DATE <i>08.09.04</i>	



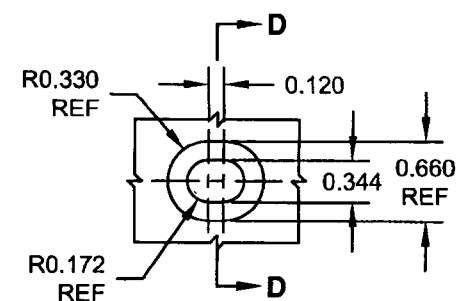
SECTION B-B



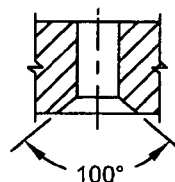
DETAIL A



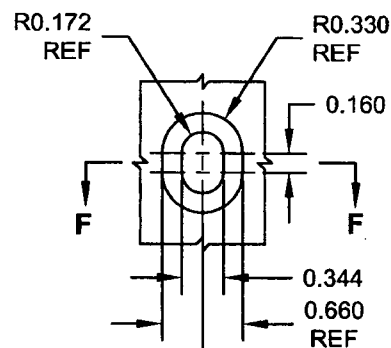
SECTION D-D



DETAIL C



SECTION F-F



DETAIL E

alo 70929

NOTE: THIS CHANGE HAS BEEN DONE TO CLARIFY SLOT DIMENSIONS ONLY. NO CHANGES HAVE BEEN MADE TO THE PARTS
SEE NCR 08-051 FOR FURTHER INFORMATION
ALL OTHER INFORMATION REMAINS UNCHANGED

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WRITTEN PERMISSION FROM DART AEROSPACE LTD.

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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
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